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10/590,884

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EXAMINER

PHAM, TIMOTHY X

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                      |  |
|------------------------------|--------------------------------------|--------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/590,884 | <b>Applicant(s)</b><br>TIDWELL, PAUL |  |
|                              | <b>Examiner</b><br>TIMOTHY PHAM      | <b>Art Unit</b><br>2617              |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 14, 15 and 20-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14, 15 and 20-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☒ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Priority***

1. Applicant is advised of possible benefits under 35 U.S.C. 119(e), wherein this application is a national phase application of PCT/EP2004/050228 and claims priority. The international filing date is a U.S. filing date for prior art purposes under 35 U.S.C. 102(e). This is an application for patent filed in the United States may be entitled to the benefit of the filing date of a prior application filed in a foreign country.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 14-15 and 20-27 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 14, 20-21, 23, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cavin (US 2003/0126492) in view of Baumann (US Patent No. 7047309; Cited in PTO-892 Part of Paper No. 20100610) and Hiddink et al. (hereinafter "Hiddink"; US 2005/0143027).**

Regarding claims 14 and 25, Cavin discloses a method and Media Resource Function node of optimising the bandwidth usage on a Real-Time Protocol managed link transporting

Art Unit: 2617

media between User Equipment and a Media Resource Function of a cellular telecommunications network, the method comprising:

sampling, at one of the User Equipment and the Media Resource Function, a rate of packet loss on the link (paragraphs [0004], [0019], [0022], [0025], [0040], e.g., it is noted that the packet error rate (PER) is checked over a given period of time; therefore, it characterizes as sampling rate of a packet loss);

comparing the representative loss rate to a predefined acceptable loss rate at one of the User Equipment and the Media Resource Function (paragraphs [0004], [0025], e.g., if the PER is below a predefined drop rate; therefore, it is a comparison);

if the representative loss rate exceeds the acceptable loss rate and if a pre-defined time period has elapsed since a sending rate over the link was last adapted, then decreasing the sending rate over the link at one of the User Equipment and the Media Resource Function (paragraphs [0004], [0024], [0038], [0041]; Claims 5, 11, e.g., backing off said data rate if an error exists and said PER value is greater than a drop rate threshold);

if the representative loss rate is less than the acceptable loss rate and if a pre-defined good performance time period has elapsed since the sending rate over the link was last adapted, then increasing the sending rate over the link at one of the User Equipment and the Media Resource Function (paragraphs [0025], [0040], Claim 4, e.g., the bit rate is increased in order to maintain the best connection possible if a packet is successfully received and the PER of previous data packets are below a certain raise rate threshold); and

Cavin fails to specifically disclose in the event that the pre-defined time period and the pre-defined good performance time period have not elapsed since the sending rate was last adapted, keeping the sending rate over the link unchanged.

However, the Examiner takes Official Notice of the fact that it was notoriously well known in the art at the time of invention by applicant the data rate is keeping a constant when packet loss and the pre-defined good performance time period have not changed; Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to unchanged the data rate for advantages of increasing the efficiency and increasing the throughput.

Cavin fails to specifically disclose applying a sliding window to the sampled values, and calculating an average or other statistically representative value across the window at one of the User Equipment and the Media Resource Function.

However, Baumann discloses applying a sliding window s (col. 2 lines 20; col. 5 lines 19, 45-48; col. 14 lines 10-15, e.g., sliding window) to the sampled values, and calculating an average or other statistically representative value across the window at one of the User Equipment and the Media Resource Function (col. 2 lines 20; col. 5 lines 19, 45-48; col. 14 lines 10-15, e.g., average or mean).

Therefore, taking the teachings of Cavin in combination of Baumann as a whole, it would have been obvious to one having ordinary skill in the art at the time of the invention by applicant to apply a sliding window to the sampled values, and to calculate an average or other statistically representative value across the window for advantages of enhancing evaluation the standard deviation in a statistics.

Cavin in combination with Baumann fails to specifically disclose if a pre-defined time period has elapsed since a sending rate over the link was last adapted and if a pre-defined good performance time period has elapsed since the sending rate over the link was last adapted.

However, Hiddink discloses rate fallback feature reduces the transmission rate when the loss rate exceeds a predefined threshold (paragraph [0010]). Hiddink discloses decreasing the sending rate over the link if a pre-defined time period has elapsed since a sending rate over the link was last adapted (paragraph [0050], [0055], [0078]-[0081]; e.g., This condition is TRUE if according to the rate advice formula the current data rate should be decreased) and increasing the sending rate over the link if a pre-defined good performance time period has elapsed since the sending rate over the link was last adapted (paragraphs [0055], [0096]-[0098]).

Therefore, taking the teachings of Cavin in combination of Baumann and Hiddink as a whole, it would have been obvious to one having ordinary skill in the art at the time of the invention by applicant to decrease the rate if a pre-defined time period has elapsed since a sending rate over the link was last adapted, and to increase the rate if a pre-defined good performance time period has elapsed since the sending rate over the link was last adapted for advantages of dynamically adaptable during data transmission in order to achieve the best throughput.

Regarding claim 20, Cavin in combination with Baumann and Hiddink discloses the method according to claim 14, wherein the pre-defined good performance time period which is used to determine whether or not the sending rate may be increased is greater than the predefined time period used to determine whether or not the sending rate may be decreased (Hiddink: paragraphs [0050], [0055], [0078]-[0081], [0096]-[0098]).

Therefore, taking the teachings of Cavin in combination of Baumann and Hiddink as a whole, it would have been obvious to one having ordinary skill in the art at the time of the invention by applicant to have the pre-defined good performance time period which is used to determine whether or not the sending rate may be increased is greater than the predefined time period used to determine whether or not the sending rate may be decreased for advantages of dynamically adaptable during data transmission in order to achieve the best throughput.

Regarding claim 21, Cavin in combination with Baumann and Hiddink discloses the method according to claim 14, wherein the step of sampling is carried out at one or both of the User Equipment and the Media Resource Function (Cavin: paragraphs [0003], [0013], [0015]).

Regarding claim 23, Cavin in combination with Baumann and Hiddink discloses the method according to claim 14, wherein decisions to adapt the sending rate over the link are made at the Media Resource Function (Cavin: Fig. 2, reference 234; paragraph [0034], e.g., network controller).

**5. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cavin in combination with Baumann and Hiddink, in view of Gannage et al. (hereinafter “Gannage”; US 2004/0151158; Cited in PTO-892 Part of Paper 20091223).**

Regarding claim 15, Cavin in combination with Baumann and Hiddink discloses the method according to claim 14, fails to specifically disclose the Media Resource Function handles media distribution for Push-to-talk over Cellular services.

However, Gannage discloses the Media Resource Function handles media distribution for Push-to-talk over Cellular services (Gannage: paragraphs [0006], [0033], e.g., Push to Talk).

Therefore, taking Cavin in combination with Baumann, Hiddink and Gannage as a whole, it would have been obvious to one having ordinary skill in the art at the time of invention by applicant to have the Media Resource Function handles media distribution for Push-to-talk over Cellular services for advantages of handling real time transfer of voice through streaming (Gannage: paragraph [0008]).

**6. Claims 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cavin in combination with Baumann and Hiddink, in view of Vimpari (US 20030117972; Cited in PTO-892 Part of Paper 20091223).**

Regarding claim 22, Cavin in combination with Baumann and Hiddink discloses the method according to claim 21, fails to specifically disclose wherein the UE samples the rate of packet loss on a downlink, whilst the Media Resource Function samples the rate of packet loss on an uplink.

However, Vimpari discloses the samples packet loss on the downlink at the UE and the samples packet loss on the uplink at MRF (paragraphs [0005], [0031]).

Therefore, taking teachings of Cavin in combination with Baumann, Hiddink and Vimpari as a whole, it would have been obvious to one having ordinary skill in the art at the time of invention by applicant to have the UE samples the rate of packet loss on the downlink, and the Media Resource Function samples the rate of packet loss on the uplink for advantages of handling real time transfer of voice through streaming.

Regarding claim 24, Cavin in combination with Baumann and Hiddink discloses the method according to claim 14, fails to specifically disclose wherein the UE samples the rate of



Art Unit: 2617

packet loss on a downlink, whilst the Media Resource Function samples the rate of packet loss on an uplink, and decisions to adapt the sending rate over the link are made at the Media Resource Function, wherein the UE sends the sampled rate or an analysis of the rate to the Media Resource Function.

However, Vimpari discloses the UE samples the rate of packet loss on a downlink, whilst the Media Resource Function samples the rate of packet loss on an uplink, and decisions to adapt the sending rate over the link are made at the Media Resource Function (paragraphs [0005], [0031]), wherein the UE sends the sampled rate or an analysis of the rate to the Media Resource Function (paragraphs [0005], [0031]).

Therefore, taking teachings of Cavin in combination with Baumann, Hiddink and Vimpari as a whole, it would have been obvious to one having ordinary skill in the art at the time of invention by applicant to have the UE samples the rate of packet loss on a downlink, whilst the Media Resource Function samples the rate of packet loss on an uplink, and decisions to adapt the sending rate over the link are made at the Media Resource Function, wherein the UE sends the sampled rate or an analysis of the rate to the Media Resource Function advantages of handling real time transfer of voice through streaming.

**7. Claims 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cavin in view of Baumann.**

Regarding claim 26, Cavin discloses user Equipment for use in a cellular telecommunications network, the User Equipment communicating with a Media Resource

Art Unit: 2617

Function handling media sent between the user equipment over a Real-Time Protocol managed link, the User Equipment comprising:

means for sampling the rate of packet loss on the link (paragraphs [0004], [0019], [0022], [0025], [0040], e.g., it is noted that the packet error rate (PER) is checked over a given period of time; therefore, it characterizes as sampling rate of a packet loss); and

means for sending the sampled rate or an analysis of that rate to the Media Resource Function (paragraphs [0004], [0024]-[0025], [0038], [0041], e.g., if the PER is below a predefined drop rate; therefore, Cavin explicitly disclose an analysis of the loss rate to the Media Resource Function (node));

Regarding claim 27, Cavin discloses the User Equipment according to claim 26, wherein the means for sending the analysis of the sampled rate comprises:

means for comparing the representative loss rate to a pre-defined acceptable loss rate Function (paragraphs [0004], [0025], e.g., if the PER is below a predefined drop rate; therefore, it is a comparison);

means for sending to the Media Resource Function an analysis of whether the representative loss rate exceeds the pre-defined acceptable loss rate and a pre-defined time period has elapsed since the sending rate over the link was last adapted; (paragraphs [0004], [0024], [0038], [0041]; Claims 5, 11, e.g., backing off said data rate if an error exists and said PER value is greater than a drop rate threshold; it is noted that due to alternative claim, the recited limitation “the representative loss rate exceeds the pre-defined acceptable loss rate” is addressed);

means for sending to the Media Resource Function an analysis of whether the representative loss rate is less than the pre-defined acceptable loss rate and a pre-defined good performance time period has elapsed since the sending rate over the link was last adapted (paragraphs [0025], [0040], Claim 4, e.g., the bit rate is increased in order to maintain the best connection possible if a packet is successfully received and the PER of previous data packets are below a certain raise rate threshold; it is noted that due to alternative claim, the recited limitation “whether the representative loss rate is less than the pre-defined acceptable loss rate” is addressed);

Cavin fails to specifically disclose means for applying a sliding window to the sampled values and calculating an average or other statistically representative loss rate across the window.

However, Baumann discloses applying a sliding window s (col. 2 lines 20; col. 5 lines 19, 45-48; col. 14 lines 10-15, e.g., sliding window) to the sampled values, and calculating an average or other statistically representative value across the window at one of the User Equipment and the Media Resource Function (col. 2 lines 20; col. 5 lines 19, 45-48; col. 14 lines 10-15, e.g., average or mean).

Therefore, taking the teachings of Cavin in combination of Baumann as a whole, it would have been obvious to one having ordinary skill in the art at the time of the invention by applicant to apply a sliding window to the sampled values, and to calculate an average or other statistically representative value across the window for advantages of enhancing evaluation the standard deviation in a statistics.

Art Unit: 2617

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMOTHY PHAM whose telephone number is (571)270-7115. The examiner can normally be reached on Monday-Friday; 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne D. Bost can be reached on 571-272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Timothy Pham/  
Examiner, Art Unit 2617

/Nghi H. Ly/  
Primary Examiner, Art Unit 2617